RANCH CLUB GOLF COURSE (PWS 1090108)
SOURCE WATER ASSESSMENT REPORT

January 9, 2001

State of Idaho
Department of Environmental Quality

Under the Federal Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. The Idaho Department of Environmental Quality is completing the assessments for all Idaho public drinking water systems. The assessment for your particular drinking water source is based on a land use inventory within a 1,000 foot radius of your drinking water source, sensitivity factors associated with the source and characteristics associated with either your aquifer or watershed in which you live.

This report, *Source Water Assessment for Ranch Club Golf Course (PWS 1090108)* located near Priest River, Idaho, describes the public drinking water system, the associated potential contaminant sources located within a 1,000' boundary around the drinking water source, and the susceptibility (risk) that may be associated with any associated potential contaminants. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this system. **The results should <u>not be</u> used as an absolute measure of risk and is not intended to undermine the confidence in your water system.**

The Ranch Club Golf Course drinking water system consists of one well. The well is located between the third tee and the fourth green. It is reportedly 600' deep. The Golf Course has a history of water samples positive for total coliform bacteria. Positive samples have been taken from various taps in the distribution system as well as from the well itself. The well was assigned a high construction score, reflecting several structural deficiencies and general lack of information about the well's construction. At the time of the well's last sanitary survey, completed 4/17/96, the well was lacking a watertight cap, which might allow surface water, rodents or insects to enter the well.

The well's hydrologic sensitivity was determined to be moderate. Although soils in the area contain visible amounts of clay, due to the lack of a well driller's log it is not possible to identify a significant, protective layer of clay in the soil above the well. More complete information provided in the form of a well driller's log may change the well's susceptibility scores.

The well was assigned low potential contaminant/land use scores in the volatile organic and synthetic organic chemical categories. This reflects the absence of these types of potential contaminant sources within the source water assessment area. Despite the lack of documented sources of potential contaminants, the well was given a total of 5 susceptibility points in each of these categories because of the nature of the land use surrounding the well. The irrigated golf course may be a source of fertilizers, herbicides and pesticides. In the inorganic chemical and microbial categories the well scored high. There are a total of five potential contaminant sites located within the source water assessment area. These consist of 4 septic tanks and an irrigation well. The septic systems may be a source of nitrates and microbial contamination, while the irrigation well could be a source of microbial contamination.

The well's overall susceptibility scores are moderate in the volatile organic chemical and synthetic organic chemical classes and high in the inorganic chemical and microbial categories. A copy of the susceptibility analysis for your system along with a map showing any potential

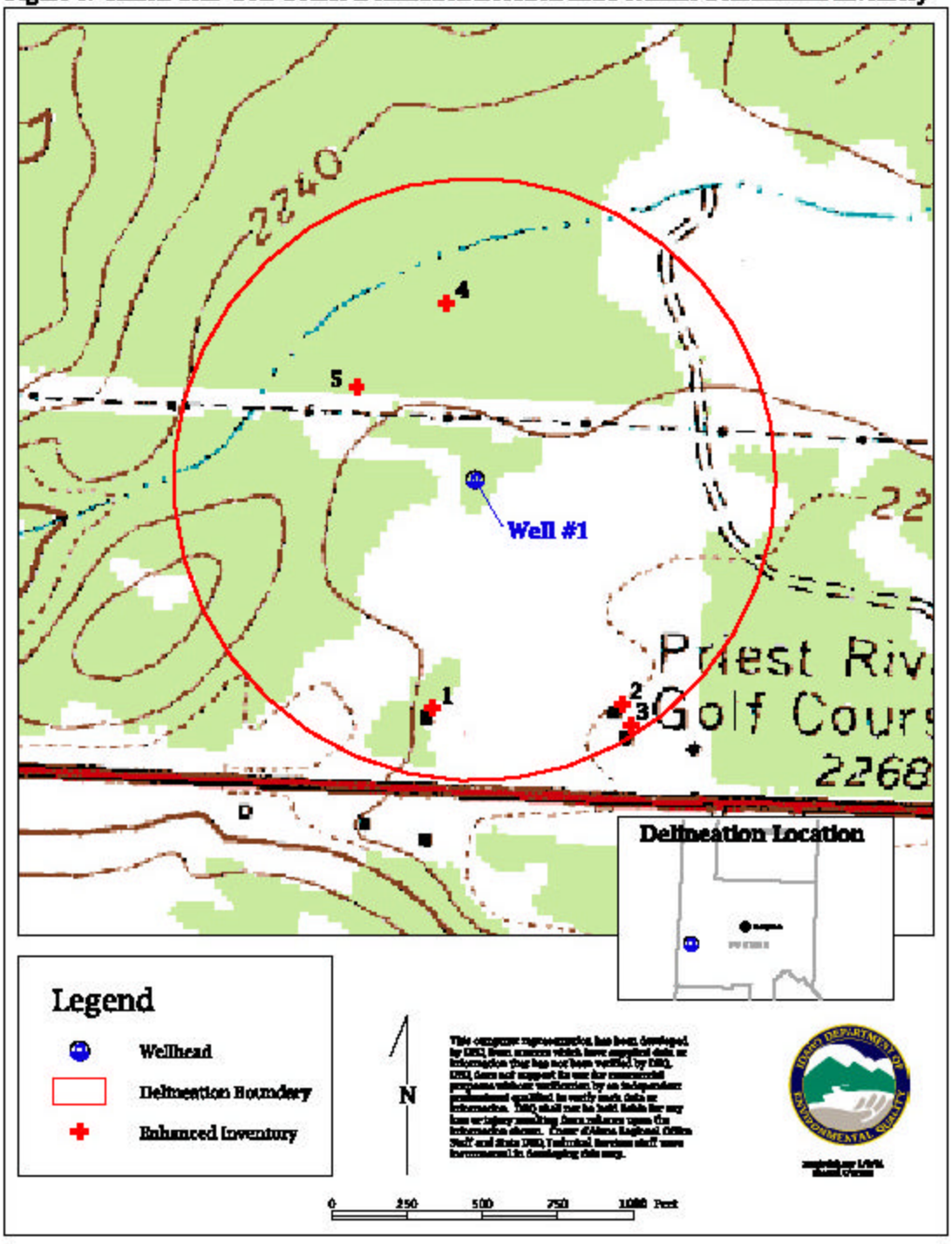
contaminant sources is included with this summary. Information regarding the potential contaminants within the 1,000' boundary have been summarized and included in Table 1.

Table 1.

SITE #	Source Description	Source of Information	Potential Contaminants
1	Septic Tank	Enhanced Inventory	IOC, Microbial
2	Septic Tank	Enhanced Inventory	IOC, Microbial
3	Septic Tank	Enhanced Inventory	IOC, Microbial
4	Septic Tank	Enhanced Inventory	IOC, Microbial
5	Irrigation Well	Enhanced Inventory	Microbial

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Figure 1. Ranch Club Golf Course Delineation Location and Potential Contaminant Inventory



This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

The Ranch Club Golf Course should focus source water protection activities on implementation of practices aimed at minimizing the potential for microbial contamination of the well. This includes ensuring proper maintenance of the septic tanks located within the source water assessment area. The golf course may want to take steps to educate the owners of septic tanks not owned by the golf course, but located within the source water assessment area, about the importance of septic tank maintenance. The well should be fitted with a watertight well cap to prevent surface water and foreign objects from entering the well. The drinking water well casing and surface seal should be periodically inspected for cracks, as should the nearby irrigation well to prevent contamination of the drinking water well by water leaking from the irrigation well. Lastly, potential contaminants such as fertilizers, pesticides and herbicides should be used sparingly in the area surrounding the well. The water system operator may want to establish a dialogue with maintenance personal regarding the importance of these practices. Source water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term.

For assistance in developing source water protection strategies please contact Alan Miller at the Coeur d'Alene regional IDEQ office at (208) 769-1422.

DEQ website:

http://www.state.id.us

Attachment A

Ranch Club Golf Course Susceptibility Analysis Worksheet

Ground Water Final Susceptibility Scoring

0-5 = Low Susceptibility

6-12 = Moderate Susceptibility

13-18 = High Susceptibility

Ground Water Susceptibility Report Public Water System Name : RANCH CLUB GOLF COURSE Well# : WELL #1

Public Water System Number 1090108 1/9/01 9:16:59 AM

1. System Construction		SCORE
Drill Date	1/1/79	
Driller Log Available	NO	
Sanitary Survey (if yes, indicate date of last survey)	YES	1996
Well meets IDWR construction standards	NO	1
Wellhead and surface seal maintained	NO	1
Casing and annular seal extend to low permeability unit	NO	2
Highest production 100 feet below static water level	NO	1
Well located outside the 100 year flood plain	NO	1
Total System Construction Score		6

2. Hydrologic Sensitivity		
Soils are poorly to moderately drained	YES	0
Vadose zone composed of gravel, fractured rock or unknown	YES	1
Depth to first water > 300 feet	NO	1
Aquitard present with > 50 feet cumulative thickness	NO	2
Total Hydrologic Score		4

3. Potential Contaminant / Land Use - ZONE 1A		IOC Score	VOC Score	SOC Score	Microbial Score
Land Use Zone 1A	IRRIGATED PASTURE	1	1	1	1
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		1	1	1	1

Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	YES	4	0	0	5
(Score = # Sources X 2) 8 Points Maximum		8	0	0	8
Sources of Class II or III leachable contaminants or	YES	4	0	0	
4 Points Maximum		4	0	0	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Greater Than 50% Irrigated Agricultural Land	4	4	4	4
Total Potential Contaminant Source / Land Use Score - Zone 1B		16	4	4	12
Cumulative Potential Contaminant / Land Use Score		17	5	5	13
4. Final Susceptibility Source Score		15	11	11	15
5. Final Well Ranking		High	Moderate	Moderate	High

POTENTIAL CONTAMINANT INVENTORY
LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as ASuperfund@ is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.